



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/450,584	11/30/1999	SHIGERU TSUKIMURA	046601-5034	7883

9629 7590 05/08/2003

MORGAN LEWIS & BOCKIUS LLP
1111 PENNSYLVANIA AVENUE NW
WASHINGTON, DC 20004

EXAMINER

CARTER, TIA A

ART UNIT	PAPER NUMBER
----------	--------------

2622

DATE MAILED: 05/08/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/450,854

Applicant(s)

YU, LIN

Examiner

Tia A Carter

Art Unit

2622

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 November 1999.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) _____ is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Trask (US. 6549303) in view of Kanata et al. (US. 6473202).

Regarding claim [1], Trask discloses an image processing device (fig. 1, col. 3, lines 58-63), comprising:

Trask **discloses** an input part to which image data represented by a plurality of colors including black input (fig. 1, col. 4, lines 45-54); The black color is inputted once converted from the basic RGB, also, the reference cites other types of image data which may include pre-converted data that contains black color prior to input.

Trask do **not disclose** a black area detector that detects a black area in the image data.

Kanata et al. **disclose** a black area detector that detects a black area in the image data (fig. 1, col.4, lines 40-42); and

Trask **disclose** an output part that adds color materials, except a black material, of a predetermined amount to the black area regardless of contents of the image data in a

background of the black area and outputs the color materials and the black material (fig. 1-2, col. 5, lines 41-54; col. 6, lines 55-67 and col. 7, lines 1-5).

It would have been obvious to one skilled in the art at the time of the invention to modify Trask wherein the trapping unit would comprise a black area detector and a edge detector, unlike the edge determiner disclosed in Trask reference (col. 6, lines 64-67)), which helps the trapping method narrow specific regions of the defined image to correct the edges with errors.

Therefore, it would have been obvious to one skilled in the art at the time of the invention to combine Trask with Kanata et al. wherein the limitations in claim 1 is achieved as cited.

Regarding claim [2], Trask discloses an image processing device (fig. 1, col. 3, lines 58-63), comprising:

Trask **discloses** an input part to which image data represented by a plurality of colors including black is input (fig. 1, col. 4, lines 45-54); The black color is inputted once converted from the basic RGB, also, the reference cites other types of image data which may include pre-converted data that contains black color prior to input.

Trask **do not disclose** a black area detector that detects a black area in the image data.

Kanata et al. **disclose** a black area detector that detects a black area in the image data (fig. 1, col.4, lines 40-42);

Trask **do not disclose** an edge detector that detects an edge of the black area.

Kanata et al. **disclose** an edge detector that detects an edge of the black area (fig. 1, col. 4, lines 40-44 and 56-58); and

Trask **discloses** an output part that adds color materials, except a black material, of an amount according to colors in the periphery of the edge to the edge, adds the colors materials, except the black material, of a predetermined amount to the black area except the edge regardless of contents of the image data in a background of the black area, and outputs the color materials and black material (fig. 1-2, col. 5, lines 41-54; col. 6, lines 55-67 and col. 7, lines 1-5).

It would have been obvious to one skilled in the art at the time of the invention to modify Trask wherein the trapping unit would comprise a black area detector and a edge detector, unlike the edge determiner disclosed in Trask reference (col. 6, lines 64-67)), which helps the trapping method narrow specific regions of the defined image to correct the edges with errors.

Therefore, it would have been obvious to one skilled in the art at the time of the invention to combine Trask with Kanata et al. wherein the limitations in claim 2 is achieved as cited.

Regarding claim [3], Trask discloses an image processing device according to claim 2, further comprising:

An adjuster that adjusts the amount of the color materials except the black material added to the edge in case a total amount of the color material and the black material to

Art Unit: 2622

be output to the edge exceeds a predetermined amount (fig. 4, col. 7, lines 15-29 and lines 56-67; col. 8, lines 1-14).

Regarding claim [4], Trask discloses an image processing device according to claim 1, wherein the output part is based upon primary colors of black (K), yellow (Y), magenta (M) and cyan (C); and an amount of each color material of the Y, M, C is output to the black area in range of 10 to 40 % (percentage by weight) of the amount of the black material (fig. 7-8. col. 15, lines 1-20). The percentage amount is strictly a design choice and will not change the specific scope of the invention.

Regarding claim [5], Trask discloses an image processing device according to claim 4, further comprising:

A reduction unit that reduces the amount of the color material of the Y, M, C, keeping the amount of the color material of the Y, M, C, keeping the amount of the black material in case a total amount of the color materials of k, Y, M, C exceeds a predetermined value (fig. 4, col. 7, lines 15-29 and lines 56-67; col. 8, lines 1-14). The adjuster can include the reduction unit wherein the reduction unit is a form of adjustment.

Regarding claim [6], Trask discloses an image processing method (fig. 1, col. 3, lines 58-63), comprising the steps of:

Art Unit: 2622

Trask **discloses** inputting image data represented by a plurality of colors including black (fig. 1, col. 4, lines 45-54); The black color is inputted once converted from the basic RGB, also, the reference cites other types of image data which may include pre-converted data that contains black color prior to input.

Trask **do not disclose** detecting a black area in the image data (fig. 1, col. 4, lines 40-42);

Kanata et al. **disclose** detecting a black area in the image data (fig. 1, col. 4, lines 40-42); and

Trask **discloses** adding color materials, except a black material, of a predetermined amount to the black area regardless of the contents of the image data in a background of the black area and outputting the color materials and the black material (fig. 1-2, col. 5, lines 41-54; col. 6, lines 55-67 and col. 7, lines 1-5).

It would have been obvious to one skilled in the art at the time of the invention to modify Trask wherein the trapping unit would comprise a black area detector which helps the trapping method narrow specific regions of the defined image to correct the edges with errors.

Therefore, it would have been obvious to one skilled in the art at the time of the invention to combine Trask with Kanata et al. wherein the limitations in claim 6 is achieved as cited.

Regarding claim [7], Trask discloses an image-processing device (fig. 1, col. 3, lines 58-63), comprising:

Trask **discloses** an input part to which image data represented by a plurality of colors including black is input (fig. 1, col. 4, lines 45-54); The black color is inputted once converted from the basic RGB, also, the reference cites other types of image data which may include pre-converted data that contains black color prior to input.

Trask **do not disclose** a black area detector that detects a black area in the image data.

Kanata et al. **disclose** a black area detector that detects a black area in the image data (fig.1, col. 4, lines 40-42);

Trask **discloses** an image determination unit that determines a type of an image in each area in the image data (fig. 1, col. 5, lines 35-40); The object identifier is supplied with the print image data.

Trask **discloses** an output part that adds color materials, except a black material, of a predetermined amount to an area determined to hold a predetermined type by the image determination unit and detected as a black area by the black area detector regardless of contents of the image data in a background of the black area and outputs the color materials and the black material (fig. 1-2, col. 5, lines 41-54; col. 6, lines 55-67 and col. 7, lines 1-5).

It would have been obvious to one skilled in the art at the time of the invention to modify Trask wherein the trapping unit would comprise a black area detector which

helps the trapping method narrow specific regions of the defined image to correct the edges with errors.

Therefore, it would have been obvious to one skilled in the art at the time of the invention to combine Trask with Kanata et al. wherein the limitations in claim 7 is achieved as cited.

Regarding claim [8], Trask discloses an image processing device according to claim 7, wherein the output part adds color materials, except the black material, of a predetermined amount to an area determined to hold a character by the image determination unit and detected as a black area by the black area detector regardless of contents of the image data in a background of the black area and outputs the color materials and a black material (fig. 1-2, col. 5, lines 41-54; col. 6, lines 55-67 and col. 7, lines 1-5). Trask reference edge determiner identifies specific regions of trapping for applying the ink toners supplied by the system.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claim 9 rejected under 35 U.S.C. 102(e) as being anticipated by Trask (US. 6549303).

Regarding claim [9], Trask discloses an image processing method (fig. 1, col. 3, lines 58-67), comprising the steps of:

Inputting image data represented by a plurality of colors including black (Fig. 1, col. 4, lines 45-54); The black color is inputted once converted from the basic RGB, also, the reference cites other types of image data which may include pre-converted data that contains black color prior to input.

Adding color materials, except a black material, of a predetermined amount to an area determined to hold a predetermined image type and detected as a black area from among areas in the image data regardless of contents of the image data in a background of the black area and outputting the color materials and the black material (fig. 1-2, col. 5, lines 41-54; col. 6, lines 55-67 and col. 7, lines 1-5). Trask reference edge determiner identifies specific regions of trapping for applying the ink toners supplied by the system.

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Fujimotot et al. (US. 5771107), Hyasaki et al. (US. 4953015), Suzuki (US. 5134667), Shimizu et al. (US. 5483361), Birnbaum et al. (US. 5923821), Coleman (US. 6088122), Morgana (US. 6377711), Yoshida (US. 4700399), Fujimoto et

Art Unit: 2622


al. (US. 5712924), Steinkirchner (US. 5392365), Gartland (US. 5666543), Bloomberg (US. 5581667), Murata (US. 5392139), and Murata (US. 5477346) are cited to show related art with respect to edge misregistration and/or correction.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tia A Carter whose telephone number is 703 - 306-5433. The examiner can normally be reached on M-F (9:30-6:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward L Coles can be reached on 703-305-4712. The fax phone numbers for the organization where this application or proceeding is assigned are 703-746-6036 for regular communications and 703-872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-6056.

TAC
May 2, 2003

Tia A Carter
Examiner
Art Unit 2622

EDWARD COLES
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER